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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,578	03/11/2004	Dai Hyun Kim	HI-0192	4811

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KED & ASSOCIATES, LLP
P.O. Box 221200
Chantilly, VA 20153-1200

EXAMINER	
TRAN, MY CHAU T	
ART UNIT	PAPER NUMBER
2629	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/797,578	KIM ET AL.	
	Examiner	Art Unit	
	MY-CHAU T. TRAN	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *10-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/14/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Application and Claims Status

1. Applicant's response filed 01/18/2007 is acknowledged and entered. Claims 1-19 are pending.

Election/Restrictions

2. Applicant's election with traverse of Group I (Claims 1-9) in the reply filed on 01/18/2007 is acknowledged.

The traversal is on the ground that '*the search and examination of the entire application could be made without serious burden*' and supports this assertion by pointing to a statement in the MPEP §803 '*which it states that "if the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to distinct or independent inventions*"'. This argument has been fully considered but is not found to be persuasive for the reasons below.

First, MPEP §803 also states that restriction is proper between patentably distinct inventions where the inventions are (1) independent or distinct as claimed and (2) a serious search and examination burden is placed on the examiner if restriction is not required. In the instant situation, the inventions of Groups I and II are drawn to distinct inventions, which are related as subcombinations disclosed as usable together in a single combination as set forth in the previous Office Action. Restrictions between the inventions are deemed to be proper for the reason previously set forth.

Second, in regard to burden of search and examination, MPEP §808.02 states that a burden can be shown if the examiner shows either separate classification, different field of search or separate status in the art. Here, Group I is classified in class 345, subclass 692, and Group II is classified in class 345, subclass 60. In the instant case a burden has been established in showing that the inventions of Groups I and II are classified separately necessitating different searches of issued US Patents in different subclasses. However, classification of subject matter is merely one indication of the burdensome nature of search. The literature search, particularly relevant in this art, is not co-extensive, because there are various distinct driving methods for plasma display panels that includes Address and Display period Separated (ADS) driving methods and Address While Display (AWD) driving method wherein within each of these driving methods are a variety of distinct methodologies. Additionally, it is submitted that the inventions of Groups I and II have acquired a separate status in the art. Clearly different searches and issues are involved in the examination of each Group.

For these reasons, the restriction requirement is deemed to be proper and is therefore made **FINAL**.

3. Claims 10-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to ***a nonelected invention***, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 01/18/2007.

4. Claims 1-9 are under consideration in this Office Action.

Priority

5. Receipt is acknowledged of papers, (i.e. Korean Patent Application No(s). 10-2003-0015175; Filed: March 11, 2003), submitted on 03/11/2004 under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

6. The information disclosure statement (IDS) filed on 09/14/2005 has been reviewed, and the references that have been considered are initialed as recorded in PTO-1449 form.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 provides for the use of an apparatus (i.e. plasma display panel), but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. While all of the technical details of a method need not be recited, the claims should include enough information to clearly and accurately describe the invention and how it is to be practiced, for example the minimum requirements for method steps minimally include the apparatus feature(s) and its mode of operation(s) such as

arranging, in time sequence, a plurality of subfields each having a brightness weight, dividing a period of a frame displaying a single picture into a plurality of subframes, or applying a write pulse. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. See MPEP § 2173.05(q). Consequently, claim 1 and all its dependent claims are rejected under 35 U.S.C. 112, second paragraph.

b. Claim 4 is vague and indefinite because it is unclear how the claimed address period increase or decrease in the first period when '*the wall charge formed during the address period is maintained*', i.e. what is being increase or decrease of the address period in the first period? Thus, claim 4 and all its dependent claims are rejected under 35 U.S.C. 112, second paragraph.

c. Claim 5 is vague and indefinite because it is unclear how the claimed sustained period increase or decrease in the second period when '*the wall charge formed during the sustained period is maintained*', i.e. what is being increase or decrease of the sustained period in the second period? Thus, claim 5 and all its dependent claims are rejected under 35 U.S.C. 112, second paragraph.

d. The phrase "*average picture level (APL)*" of claim 6 is vague and indefinite because it is unclear as to the means of determining an 'average' picture level. It is unclear what constitutes the metes and bounds of an 'average' picture level, i.e. how is this vague calculated or is it an arbitrary number. Accordingly, the claim 6 and all its dependent claims are rejected under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd. App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). See MPEP § 2173.05(q).

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Tajima et al. (US Patent 5,818,419).

For ***claim 1***, Tajima et al. disclose a method for driving a plasma display panel (see e.g. Abstract; col. 1, lines 6-13; col. 4, line 43 thru col. 5, line 12). The method of driving the display device wherein the picture is display through a frame having a plurality of sub-frames (refers to instant claimed limitation of n^{th} frame and $(n+1)^{th}$ frame) that is time-divided in accordance with the weight value of the gray scale (refers to instant claimed limitation of brightness weighting

value) for each sub-frames comprises the step of selecting the number of sub-frames that can be displayed within a single period for the single frame in accordance with a frequency of a vertical synchronization signal (see e.g. col. 4, line 60 thru col. 5, line 7; col. 8, line 65 thru col. 9, line 30; figs. 2-4). In addition, some sub-frames may have the same gray scale weighted value (see e.g. col. 17, lines 5-21; fig. 15).

For ***claim 2***, Tajima et al. disclose that the sub-frame period comprises a reset period, an addressing period, and a sustained period (see e.g. col. 10, lines 15-32; fig. 37).

Therefore, the method of Tajima et al. does anticipate the instant claimed invention.

13. Claims 1-3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanazawa (US Patent 5,835,072).

For ***claim 1***, Kanazawa discloses a driving method for plasma display (see e.g. Abstract; col. 1, lines 7-14; col. 2, lines 34-67). The method of driving the plasma display wherein the one frame is divided into a plurality of subfields (refers to instant claimed limitation of n^{th} frame and $(n+1)^{th}$ frame) in accordance with the weight value of the gray scale (refers to instant claimed limitation of brightness weighting value) and the frame is control by synchronization signals such as a vertical synchronization signal (see e.g. col. 5, lines 47-65; fig. 4). In addition, some subfields may have the same gray scale weighted value (see e.g. col. 11, lines 28-43).

For ***claim 2***, Kanazawa discloses that each subfield comprises a reset period, an addressing period, and a sustained period (see e.g. col. 6, lines 11-34; fig. 5).

For ***claims 3 and 9***, Kanazawa discloses that within a frame period the address period, the sustain period, or both can be vary (see e.g. col. 9, line 51 thru col. 10, line 19; col. 11, lines 10-43).

Therefore, the method of Kanazawa does anticipate the instant claimed invention.

14. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Awamoto et al. (US Patent 5,898,414).

For ***claim 1***, Awamoto et al. disclose a driving method for plasma display (see e.g. Abstract; col. 1, lines 9-14; col. 2, lines 25-41). The method of driving the plasma display wherein the one frame is divided into a plurality of subframes (refers to instant claimed limitation of n^{th} frame and $(n+1)^{th}$ frame) in accordance with the weight value of the gray scale (refers to instant claimed limitation of brightness weighting value) and the frame is control by synchronization signals such as a vertical synchronization signal (see e.g. col. 5, line 43 thru col. 6, line 47; figs. 5 and 7). In addition, some subframes may have the same gray scale weighted value (see e.g. fig. 5).

For ***claim 2***, Awamoto et al. disclose that each subframe is divided into a reset period, an addressing period, and a sustained period (see e.g. col. 4, lines 29-43; figs. 3 and 5)

Therefore, the method of Awamoto et al. does anticipate the instant claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is 571-272-0810.

The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

My-Chau T. Tran
March 1, 2007

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600